ABSTRACT OF THE DISCLOSURE

An air conditioner has a refrigerant circuit, a control valve, a detector, a calculator, a suction pressure sensor and a compressor controller. The refrigerant circuit includes a variable displacement compressor. First and second pressure monitoring points are located in the refrigerant circuit. The control valve includes an actuator and a pressure sensing mechanism that has a pressure sensing member and a valve body. The detector detects cooling load information in the refrigerant circuit. The calculator calculates a target pressure in a relatively low pressure region in the refrigerant circuit in response to the detected cooling load information. The suction pressure sensor detects actual pressure in the relatively low pressure region in the refrigerant circuit. The compressor controller controls the actuator to eliminate a differential between the calculated target pressure and the detected actual pressure.